

**REMARKS**

Claims 1-13 are pending.

Claims 1-13 are rejected.

Claim 6 is objected to, but would be allowable if put into independent form.

With respect to objection raised against claims 1, 8, 10, 11 and 13, we disagree with the Examiner: the obtained data are transferred **by** the means of transfer **to** a system for sending said data as a continuous stream over said network, therefore these claims should recite either :

“means of regular addition to said data transferred **to the sending system**, of error correction codes” in claims 1, 8 and 13 or

“adding error correction codes regularly to said data transferred **to the sending system**, so as to form an augmented data stream” in claims 10 and 11.

Indeed, the data are transferred **to the sending system (item 3 on fig.2) by the means of transfer (item 12 on figure 2)** but **not to** the means of transfer (see items 12 and 3 on figure 2).

With respect to objection raised against claims 1, 8, 10, 11, we disagree with the examiner: the stream should not state the “continuous stream”. Indeed, the stream mentioned in these claims is “the stream of said data transferred augmented with said added error correction codes”, i.e. the stream transferred by the means of transfer to the **sending system while the continuous stream is the one sent by the sending system onto the network** (“a system for sending said data as a continuous stream over said network”). To make it clear, refer to figure 2, where the means of transfer 12 sends data to the sending system 3, the sending system itself being adapted for sending said data as a continuous stream over said network. So the continuous stream is the one between the sending system 3 and the network and not the one between the means of transfer 12 and the sending system 3.

Claims 10 and 11 are rewritten in step form. To this aim, the expression "there is a switch" is replaced by "switching".

No new matter was entered in view of these amendments.

I. Rejection of Claims 1-9 and 11-12 as being rejected under 35 U.S.C. 101

The Examiner rejected Claims 1-9 and 11-12 under 35 U.S.C. 101 as being directed towards non-statutory subject matter.

Specifically, regarding Claims 1-7, the Examiner cited that the claims, "lack the necessary physical articles or objects to constitute a machine or manufacture within the meaning of 35 U.S.C. 101. They are clearly not a series of steps or acts to be a process nor are they a combination of chemical compound to be a composition of matter. As such, they fail to fall within a statutory category. They are, at best, functional descriptive material per se".

The Applicants assert that the statutory class Claims 1-7 fall under would be an apparatus (device) which is clearly a subject matter covered under 35 U.S.C 101, where the device claim is written using means language:

"Whoever invents or discovers any new and useful process, **machine**, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title."

Additionally, the Examiner has not indicated or disclosed to the Applicants why Claims 1-7 are non-statutory subject matter. That is, the Examiner has not established a *prima facie* case why the claimed steps of Claims 1-7 are not for an apparatus. As cited in the MPEP 2106:

"The burden is on the USPTO to set forth a *prima facie* case of unpatentability. Therefore if USPTO personnel determine that it is more likely than not that the

claimed subject matter falls outside all of the statutory categories, they must provide an explanation. For example, a claim reciting only a musical composition, literary work, compilation of data, >signal,< or legal document (e.g., an insurance policy) *per se* does not appear to be a process, machine, manufacture, or composition of matter. >See, e.g., *In re Nuijten*, Docket no. 2006-1371 (Fed. Cir. Sept. 20, 2007)(slip. op. at 18)("A transitory, propagating signal like Nuijten's is not a 'process, machine, manufacture, or composition of matter.' . Thus, such a signal cannot be patentable subject matter.").< If USPTO personnel can establish a *prima facie* case that a claim does not fall into a statutory category, the patentability analysis does not end there. USPTO personnel must further continue with the statutory subject matter analysis as set forth below. Also, USPTO personnel must still examine the claims for compliance with 35 U.S.C. 102, 103, and 112."

The same rationale applies for the server (apparatus) Claims 8-9 and 12. Additionally, for Claim 11, it is embodied on a computer readable medium which would make the claim patentable, "When functional descriptive material is recorded on some computer-readable medium, it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare *In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994)(discussing patentable weight of data structure limitations in the context of a statutory claim to a data structure stored on a computer readable medium that increases computer efficiency)". (MPEP 2106.01).

If the Examiner still wants to rejected Claims 1-9 and 11-12 under 35 U.S.C. 101, the Examiner must explain why such claimed elements are not patentable subject matter. Presumably, these claims are patentable under 101, until the Examiner establishes the required burden.

For the reasons above, it is asserted that Claims 1-9 and 11-12 are patentable.

## II. Rejection of Claim 10 as being rejected under 35 U.S.C. 101/112

The Examiner rejected Claim 10 under 35 U.S.C. 112 as being directed towards non-statutory subject matter. Specifically, the Examiner cited that the method claim did not recite any affirmative steps aside for transmission of a stream. Claim 10, as amended does claim specific steps (more than one).

Additionally, the Examiner rejected Claim 10 under 35 U.S.C. 101 as being an improper process claim because the claim previously did not recite any method steps. As amended, method steps are clearly recited.

For the reasons given above, it is asserted that Claim 10 is patentable.

## III. Rejection of Claims 1-2, 4-5, 7-13 under 35 U.S.C. 102(b)

The Examiner rejected Claims 1-2, 4-5, and 7-13 under 35 U.S.C. 102(b) as being anticipated by Wu et al. Article "Streaming Video over the Internet: Approaches and Directions," (3 March 2001), hereafter referred to as 'Wu'). Applicants disagree with this ground of rejection.

Unlike claim 1, Wu et al. neither discloses nor suggests means of switching designed to switch the means of connection from a first of said data stream entities to a second of said data stream entities when the stream of said data transferred augmented with said added error correction codes **reaches a threshold throughput equal to the sum of the second sending throughput and of an additional throughput associated with an initial input of error correction codes for said second entity.**

In addition, Wu et al. neither discloses nor suggests that the means of addition are designed to reinitialize the addition of the **error correction codes** to the initial input upon the switching of said first entity to said second entity.

These features of the device according to claim 1 makes it possible to meet the AIMD principle, i.e. a progressive increase of the throughput without an increasing the numbers of layers or streams in the database.

In section III. A. 1) rate control, Wu et al. only discloses rate control mechanisms i.e. **how to determine the sending rate** of video based on estimated bandwidth in the network. Especially, two approaches are describes: the probe-based and the model-based approach. Both approaches uses **feedback information from the network to detect congestion**. But, it does not describes to switch from one **data stream** entity to another **data stream** when the stream of said data transferred augmented with said added error correction codes **reaches a threshold throughput equal to the sum of the second sending throughput and of an additional throughput associated with an initial input of error correction codes for said second entity**.

In section III. A 2) rate shaper, Wu et al. only discloses **how to match the rate of pre-compressed video bitstream to the target rate constraint**. To this aim several filters are describes (transcoding, frame/layer dropping, etc). The filter of the rate shaper is adapted either to requantized the data, to decode and reencode, to drop frame but does not teach any switching between streams. However, it does not describes **to switch** from one **data stream** entity to another **data stream** when the stream of said data transferred augmented with said added error correction codes **reaches a threshold throughput equal to the sum of the second sending throughput and of an additional throughput associated with an initial input of error correction codes for said second entity**.

In none of the above sections, the throughput of the **data stream** entities augmented with added error correction codes is compared with **the sum of the second sending throughput and of an additional throughput associated with an initial input of error correction codes**.

Besides, in section III B, Wu et al does not disclose nor suggests that the means of addition are designed to reinitialize the addition of the error correction codes to the initial input **upon the switching** of said first entity to said second entity. Indeed, as explained previously, Wu et al. does not disclose any switching between a first of said data stream entities to a second of said data stream entities. Section III B does not deal at all with any reinitialization of the addition of the error correction codes.

Therefore Claim 1 is novel and non obvious over cited prior art. In addition, Claims 8, 10, 11, and 13 are patentable for the same reasons given above for Claim 1. Also, Claims 2, 4-5, 7, and 12 are patentable, as such claims depend on allowable Claim 1. Applicants request that the Examiner remove the rejection to these claims.

#### IV. Rejection of Claim 3 under 35 U.S.C. 103(a)

The Examiner rejected Claim 3 under 35 U.S.C. 103(a) as being anticipated by Wu et al. article "Streaming Video over the Internet: Approaches and Directions," (3 March 2001), (hereafter referred to as 'Wu') in further view of Giancola et al. Article "A Novel Approach to Error Protection in Medium Access Control Design" (hereafter referred to as 'Giancola'). Applicants disagree with this ground of rejection.

Giancola et al. focuses on error protection (see section 2.2.1) at the MAC layer. Unlike claim 1, Wu et al. neither discloses nor suggests means of switching designed **to switch** the means of connection from a first of said data stream entities to a second of said data stream entities when the stream of said data transferred augmented with said added error correction codes **reaches a threshold throughput equal to the sum of the second sending throughput and of an additional throughput associated with an initial input of error correction codes for said second entity.**

In addition, Giancola et al. with Wu neither discloses nor suggests that the means of addition are designed to reinitialize the addition of the error correction codes to the initial input upon the switching of said first entity to said second entity.

For the reasons given above, Applicants assert Claim 3 is patentable.

Respectfully submitted,  
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